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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/399,682	09/21/1999	KEHSING J. CHOU	A8009	2544

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EXAMINER

PHAM, HUNG Q

ART UNIT PAPER NUMBER

2172

DATE MAILED: 04/06/2004

24

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/399,682

Applicant(s)

CHOU ET AL.

Examiner

HUNG Q PHAM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01/23/2004 has been entered.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

**Claims 1, 8 and 15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.**

As in claims 1, 8 and 15, the claimed *the given federated data source providing a unified schema conceptual view of (c) the data and schema conceptual view from the other federated data sources* was not described in the specification.

### **Claim Rejections - 35 USC § 102**

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Chang et al. [USP 6,263,342 B1].**

**The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.**

Regarding to claims 1, 8 and 15, Chang teaches a computer method and system capable of searching multiple heterogeneous datastores with heterogeneous data types by employing an object oriented data model to define a federated datastore object. A Datastore 9 object represents and manages a connection to a datastore, transactions, and the execution of datastore commands (Col. 30, Lines 18-20). As shown in FIG. 9 is the federated datastore 37 for coordinating query evaluation, data accessing, and transaction processing of the participating datastores (Col. 40, Lines 55-57).

DatastoreFederated 37 implements the Datastore 9 interface, the user can use this same interface for accessing other datastores, such as DatastoreDL, DatastoreOD, etc. From this interface level, DatastoreFederated 37 is consistent with other datastores (Col. 39, Lines 25-39). As seen, the federated datastore 37 as *a given federated data source* coordinates query evaluation, data-access, and transaction processing of the participating datastores as *receiving a request for data*. As shown in FIG. 4, when a user wants to submit a query, he/she can start by creating a specific datastore object 9 to give him/her access to the query processing functions provided by that datastore 9 (Col. 9, Lines 21-24). OnDemandQuery is created by a datastore object 9 to represent and execute a query involving parametric data in OnDemand data stores (Col. 21, Lines 20-25). FederatedQuery is a concrete implementation of Query 13 which delegates the processing task to each of the native data stores or to its associated federated data store 37 (Col. 21, lines 44-59). A federated data store 37 is a virtual data store, which combines several heterogeneous data stores 9 into a consistent and unified conceptual

view. This view, or a federated schema, is established via schema mapping of the underlying data stores (Col. 40, Lines 30-37). The federated query object coordinates query processing functions for multiple heterogeneous data stores in a single query. Sub queries managed by a federated query object include parametric, text, image, SQL, and combined queries, even if the various sub queries are for different data stores such as DB2, Visual Info, OnDemand, Digital Library, etc. . . The federated query object can even have another federated query object as a sub query (Col. 4, Lines 20-28). As shown in FIG. 8 is federated collection 8 or a collection containing Results objects 6, which may come from several heterogeneous datastores 9 (Col. 13, lines 44-49). As seen, from the federated datastore 37 as *the given federated data source, data is retrieved from* different data stores such as DB2, Visual Info, OnDemand, Digital Library, or its associated federated data store 37 as *a plurality of datastores* by using OnDemandQuery or FederatedQuery. The result of an OnDemandQuery query to search for OnDemand data store is *data from one or more terminal data repositories*. The result of a FederatedQuery to search its associated federated data store 37 is *data, with a schema conceptual view of the data, from one or more other federated data sources*. The result of a FederatedQuery with a sub query such as SQL, text, image query to search for a DB2, Digital Library, or Visual Info data store is illustrated by FIG. 10. As shown in FIG. 10, a user can create a federated query string, FederatedQuery then invokes and parses query string into a federated query canonical form 44, which is translated, filtered, converted into several native queries that corresponds to each native datastore associated to the federated datastore 37. When the results come back, they will be

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converted, filtered and merging to have an end-result (Col. 43, Line 58-Col. 44, Line 30). As seen, the process of translating, filtering and converting controls a FederatedQuery with a sub query such as SQL, text, image query to search for a DB2, Digital Library, or Visual Info data store, and the process of translating, filtering and merging the result from these data stores performs the function of a *search gateway data source*. In different words, the result of a FederatedQuery with a sub query such as SQL, text, image query is *data, without a conceptual view of the data, from one or more search gateway data sources*. Chang further discloses a conceptual schema of a federated datastore 37 to define a mapping between the concepts in the federated datastore 37 to concepts expressed in each participating datastore schema. In general, a schema mapping handles the difference between how the data are stored in the datastore, the data store's conceptual schema, and how the user wants to process them in the application program. The federated data store object can provide a unified conceptual view of all of the included data stores by mapping or without mapping (Col. 4, Lines 33-41), and the included data stores could be native data stores or its associated federated data store 37 (Col. 21, lines 50-53). As seen, federated data store 37 as *the given federated data source providing a unified schema conceptual view of several data stores*, for example: Visual Info, On Demand, Digital Library as *(a) the data from the plurality of datastores, (b) the data from the terminal data repositories*, and its associated federated data store as *(c) the data and schema structural view from the other federated data sources*.

Regarding to claims 2, 9 and 16, Chang teaches all the claimed subject matters as discussed in claims 1, 8 and 15, Chang further discloses *each search gateway data source searches for data in one or more other data sources* (Col. 2, lines 16-50).

Regarding to claim 3, 10 and 17, Chang teaches all the claimed subject matters as discussed in claims 1, 8 and 15, Chang further discloses *each federated data source, each terminal data repository, and each search gateway data source is represented by a data object* (FIG. 6, Col. 10, lines 24-31).

Regarding to claims 4, 11 and 18, Chang teaches all the claimed subject matters as discussed in claims 3, 10 and 17, Chang further discloses *each data object is based on a class that inherits the properties of a base datastore class* (FIG. 3, Col. 8-9, Col. 22, lines 16-42).

Regarding to claims 5, 12 and 19, Chang teaches all the claim subject matters as discussed in claims 4, 11 and 18, Chang further discloses *each data object is manipulated via methods of the class on which the data object is based* (Col. 22, line 16-Col. 30, line 5).

Regarding to claims 6, 13 and 20, Chang teaches all the claim subject matters as discussed in claims 1, 8 and 15, Chang further discloses the step of *submitting a search gateway query from the given federated data source to each search gateway data source* (FIG. 6, Col. 10, lines 24-31).




Regarding to claims 7, 14 and 21, Chang teaches all the claim subject matters as discussed in claims 1, 8 and 15, Chang further discloses *each terminal data repository and each search gateway data source may be queried for data directly* (FIG. 6, Col. 10, lines 24-31).

### **Conclusion**

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG Q PHAM whose telephone number is 703-605-4242. The examiner can normally be reached on Monday-Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN E BREENE can be reached on 703-305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner Hung Pham  
March 17, 2004

  
SHAHID ALAM  
PRIMARY EXAMINER